

No.3265

**LA6532M** 

## 4-Channel BTL-Use Driver

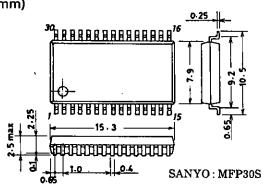
The LA6532M is a 4-channel BTL-use driver designed for compact disc pickup actuation.

## **Functions and Features**

- · BTL-use 4-channel power amp
- $\cdot$  I<sub>O</sub> max 700mA×2400mA×2 (with voltage limiter)
- · With muting function

Maximum Ratings at Ta = 25°C					unit				
Maximum Supply Voltage V <sub>CC</sub> max				9	V				
Allowable Power Dissipation Pd max				0.9	W				
Differential Input Voltage	$ m V_{ID}$			8	V				
Common-Mode Input Voltage	$V_{ICM}$			8	V				
Maximum Input Voltage	V <sub>INB</sub> max	Buffer amp		8	V				
Muting Pin Voltage	$V_{Mute}$	•		8	V				
Operating Temperature	Topr		-20 to -	°C					
Storage Temperature	Tstg		-55  to  +150		$^{\circ}\mathrm{C}$				
Operating Conditions at $Ta = 25^{\circ}C$					unit				
Maximum Supply Voltage	$ m v_{cc}$			5	V				
Load Resistance	$R_L$	Pins 3-4,12-13,18-19,27-28		8	Ω				
Operating Characteristics at Ta = 25°C, V <sub>CC</sub> = 5.0V				typ	max	unit			
No-Loaded Current Dissipation		Note 1	25	40	60	mA			
No-Loaded Current Dissipation 2 I <sub>CC</sub> 2		Note 2	5	9	20	mA			
No-Loaded Current Dissipation 3 ICC3		Note 3	25	40	60	mA			
No-Loaded Current Dissipation 4 I <sub>CC</sub> 4		Note 4	5	9	20	mA			
Output Offset Voltage 1	$V_{\mathrm{OF}}$ 1	Note 5 Amp 1-2,7-8	<b> 50</b>		50	mV			
Output Offset Voltage 2	$V_{OF}2$	Note 5 Amp 3-4,5-6	-30		30	mV			
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Package Dimensions 3073A-M30IC (unit: mm)



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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Buffer 1 Input-Output	ABIOT	Buffer amp 1	-30		30	mV
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	•						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<u> </u>	$V_{BIO}2$	Buffer amp 2	0.5	0.6	0.8	V
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$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Amp 2 Input-Output	$V_{IO}2$	Amp 2	0.5	0.6	0.8	V
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Voltage Difference						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Amp 7 Input-Output	$V_{IO}7$	Amp 7	0.5	0.6	0.8	V
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Voltage Difference						-
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Input Bias Current	$I_{\mathbf{B}}$	Note 6		100	500	nΑ
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Buffer Input Voltage Range	$V_{BICM}$	Buffer amp	1.5	$V_{CC}$	-1.5	v
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Common-Mode Input Voltage Range	$V_{ICM}$		1.0			v
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Output Source Voltage	$V_{O}1$	$R_L = 8.0\Omega 700 \text{mA amp (Note 7)}$	3.4	3.6		V
Output Sink Voltage $V_{O4}$ $R_{L} = 8.0\Omega$ 400mA amp (Note 8) 1.6 2.2 V Closed-Circuit Voltage Gain $V_{G}$ 6.0 dB	Output Sink Voltage	$V_{O}2$	$R_L = 8.0\Omega$ 700mA amp (Note 8)		1.0	1.4	V
Closed-Circuit Voltage Gain $V_G$ 6.0 dB	Output Source Voltage	$V_{O}3$	$R_L = 8.0\Omega 400 \text{mA amp (Note 7)}$	2.8	3.4		V
	Output Sink Voltage	$V_{O}4$	$R_L = 8.0\Omega 400 \text{mA amp (Note 8)}$		1.6	2.2	v
	Closed-Circuit Voltage Gain	$V_{\mathbf{G}}$	-		6.0		dB
	Output Limiting Voltage	$V_{OL}$	Amp 3, amp 6		5.0		
Muting Pin OFF-State Voltage $V_{Mute}$ 2.2 $V$	Muting Pin OFF-State Voltage	-	- · •				
Muting Pin OFF-State Current I <sub>Mute</sub> 80 A	Muting Pin OFF-State Current						

Note 1 Muting OFF. Buffer 22kΩ across V<sub>IN</sub> and V<sub>O</sub>. V<sub>IN+</sub> pin grounded

Note 2 Muting ON. Buffer  $22k\Omega$  across  $V_{\rm IN-}$  and  $V_{\rm O}.$   $V_{\rm IN+}$  pin grounded

Note 3 Muting OFF. Buffer 22k  $\Omega$  across  $V_{\rm IN-}$  and  $V_{\rm O}$  .  $V_{\rm IN+}$  pin connected to 1/2V  $_{\rm CC}$ 

Note 4 Muting ON. Buffer  $22k\Omega$  across  $V_{IN-}$  and  $V_O$ .  $V_{IN+}$  pin connected to  $1/2V_{CC}$ 

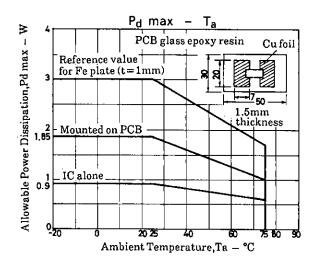
Note 5 For bridge amp, represents the difference between outputs.

Note 6 All  $V_{IN}$  connected to  $1/2V_{CC}$ .  $100k\Omega$  connected to the input. Measure the voltage difference.  $V_{IN}$  and  $V_{O}$  connected through  $100k\Omega$ . Measure the voltage difference between pins.

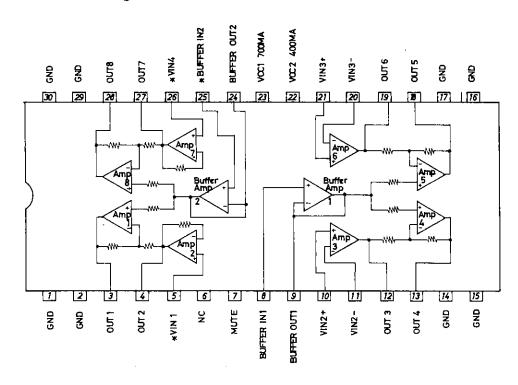
Note 7 Voltage (source) relative to GND when  $8\Omega$  load is connected across outputs of bridge amp

Note 8 Voltage (sink) relative to GND when  $8\Omega$  load is connected across outputs of bridge amp

imes: Be carefull in handling the LA6532M, because dielectric breakdown is liable to occur.



## **Equivalent Circuit Block Diagram**



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